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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/714,166	11/17/2000	Paul A. Medwick	1559A1	4576

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PPG INDUSTRIES INC  
INTELLECTUAL PROPERTY DEPT  
ONE PPG PLACE  
PITTSBURGH, PA 15272

EXAMINER

PIZIALI, ANDREW T

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 10/23/2002

10

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/714,166

Applicant(s)

MEDWICK ET AL.

Examiner

Andrew T Piziali

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 September 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 and 32-46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 and 32-46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-28, 32-39 and 43-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,821,001 to Arbab et al. (hereinafter referred to as Arbab).

Regarding claims 1-28, 32-39 and 43-46, Arbab disclose a solar control article comprising a substrate, a first dielectric antireflective layer, a first infrared reflective layer, a first primer layer, a second dielectric antireflective layer, a second infrared reflective layer, a second primer layer, a third dielectric antireflective layer and a protective overcoat layer (column 9, line 30 through column 10, line 10). Arbab discloses, in an example, that the solar control article may possess a visible light transmittance of 81.6% (column 19, line 29 through column 20, line 24). Arbab fails to mention the specific shading coefficient or reflectance of the example.

Arbab discloses that the choice of the layer thicknesses is based on the desired color and emissivity of the product, as well as manufacturing related issues (column 20, lines 24-31). Considering the substantially identical coated article disclosed by Arbab, compared to the claimed coated article, it appears that the coated article of Arbab would possess the claimed properties as a result of adjusting the layer thicknesses. It would have been obvious to one having ordinary skill in the art at the time the invention was made to adjust the thicknesses,

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because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

The Patent and Trademark Office can require applicants to prove that prior art products do not necessarily or inherently possess characteristics of claimed products where claimed and prior art products are identical or substantially identical, or are produced by identical or substantially identical processes; burden of proof is on applicants where rejection based on inherency under 35 U.S.C. § 102 or on prima facie obviousness under 35 U.S.C. § 103, jointly or alternatively, and Patent and Trademark Office's inability to manufacture products or to obtain and compare prior art products evidences fairness of this rejection, *In re Best, Bolton, and Shaw*, 195 USPQ 431 (CCPA 1977).

Regarding claims 4-7, 20-23, 25, 36, 39 and 45-46, Arbab discloses that the first dielectric antireflective layer may comprise zinc stannate/zinc oxide, the second dielectric layer may comprise zinc oxide/zinc stannate/zinc oxide, and the third dielectric antireflective layer may comprise zinc oxide/zinc stannate (column 10, lines 11-24).

Regarding claims 8 and 24, Arbab discloses that the infrared reflective layers may comprise silver (column 10, line 11-20).

Regarding claims 9-12, 16 and 37-38, Arbab discloses that the first dielectric antireflective layer may have a thickness of 320A, the first infrared reflective layer may have a thickness of 90A, the primer layers may have a thickness of 8 to 50A, the second dielectric antireflective layer may have a thickness of 805A, the second infrared reflective layer may have a thickness of 130A, the third dielectric antireflective layer may have a thickness of 270A and the protective overcoat layer may have a thickness of 30A (column 7, lines 12-39 and column 19,

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line 28 through column 20, line 16). As addressed above, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adjust the thicknesses, because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

Regarding claims 14 and 19, Arbab discloses that the substrate may be glass (column 10, lines 11-20).

Regarding claims 15 and 28, Arbab discloses that article may be used in an insulated glass unit (column 13, line 61-62).

Regarding claims 17 and 35, the example given by Arbab produces an article with a substantially neutral color (column 20, lines 24-31).

Regarding claim 26, Arbab discloses that the primer layer may include titanium (column 10, lines 11-20).

Regarding claim 27, Arbab discloses that the protective overcoat layer may comprise titanium dioxide (column 20, lines 15-16).

Regarding claim 44, the protective coating of Arbab is temporary because if one desired it could be removed.

Regarding claim 46, Arbab discloses that the first dielectric antireflective layer may comprise zinc stannate/zinc oxide (column 10, lines 11-24) and further discloses that the zinc oxide layer may have a thickness of  $58 \pm 7 \text{ \AA}$  (column 19, lines 28-37 and column 11, lines 54-65).

It is the examiner's position that the article of Arbab is identical to or only slightly different than the claimed article prepared by the method of the claim 46. Even though product-by-process claims are limited by and defined by the process, determination of patentability is

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based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the applicant to show obvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289 (Fed. Cir. 1983). Arbab either anticipated or strongly suggested the claimed subject matter. It is noted that if the applicant intends to rely on Examples in the specification or in a submitted declaration to show non-obviousness, the applicant should clearly state how the Examples of the present invention are commensurate in scope with the claims and how the Comparative Examples are commensurate in scope with the Arbab.

3. Claims 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arbab as applied to claims 1-28, 32-39 and 43-46 above, and further in view of USPN 5,776,603 to Zagdoun et al. (hereinafter referred to as Zagdoun).

Arbab does not mention the specific IG unit layout, but Zagdoun discloses that it is known in the art to mount a coated glass article between two substrates with a gas-filled space defined there between for reinforced thermal insulation (column 1, lines 30-42). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the glass article of <sup>Zagdoun</sup>Finley in a dual glass plate arrangement with a gas-filled space, because this article possesses reinforced thermal insulation suitable for many applications.

Arbab discloses that the choice of the layer thicknesses is based on the desired color and emissivity of the product, as well as manufacturing related issues (column 20, lines 24-31).

Considering the substantially identical coated article disclosed by Arbab in view of Zagdoun,

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compared to the claimed coated article, it appears that the coated article of Arbab in view of Zagdoun would possess the claimed properties as a result of adjusting the layer thicknesses. It would have been obvious to one having ordinary skill in the art at the time the invention was made to adjust the thicknesses, because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

4. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arbab as applied to claims 1-28, 32-39 and 43-46 above, and further in view of Zagdoun and USPN 4,863,540 to Catalano et al. (hereinafter referred to as Catalano).

Arbab does not mention the specific IG unit layout, but Zagdoun discloses that it is known in the art to mount a coated glass article between two substrates with a gas-filled space defined there between for reinforced thermal insulation (column 1, lines 30-42). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the glass article of <sup>Zagdoun</sup>Finley in a dual glass plate arrangement with a gas-filled space, because this article possesses reinforced thermal insulation suitable for many applications.

Zagdoun does not mention the use of one or more polymeric films placed in the gap between the substrates, but Catalano discloses that a polymeric film may be deposited on a glass substrate, in a glass sandwich structure (column 3, lines 32-35), to produce a colored or tinted glass article. It would have been obvious to one having ordinary skill in the art at the time the invention was made to place a polymeric film in the gap of the article disclosed by Arbab in view of Zagdoun, because the polymeric film may provide the article with a specific color.

5. Claims 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arbab as applied to claims 1-28, 32-39 and 43-46 above, and further in view of USPN 4,489,134 to Yudenfriend.

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Yudenfriend discloses that a removable protective layer may be applied to a film to prevent the film from forming blemishes or scratches during manufacturing (column 7, lines 3-21). It would have been obvious to one having ordinary skill in the art at the time the invention was made to apply a removable protective film to the coated article of Arbab, because the removable film would prevent the formation of blemishes and scratches during manufacturing or transportation of the article.

***Response to Arguments***

6. Applicant's arguments with respect to claims 1-28 and 32-38 have been considered but are moot in view of the new grounds of rejection.

***Conclusion***

7. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T Piziali whose telephone number is (703) 306-0145. The examiner can normally be reached on Monday-Friday (8:00-4:30).

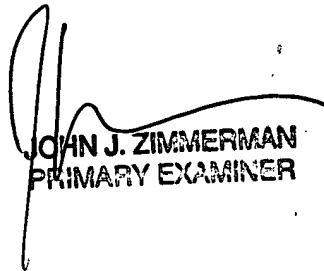
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (703) 308-3822. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-5665.



atp  
October 16, 2002

Andrew T Piziali  
Examiner  
Art Unit 1775



JOHN J. ZIMMERMAN  
PRIMARY EXAMINER